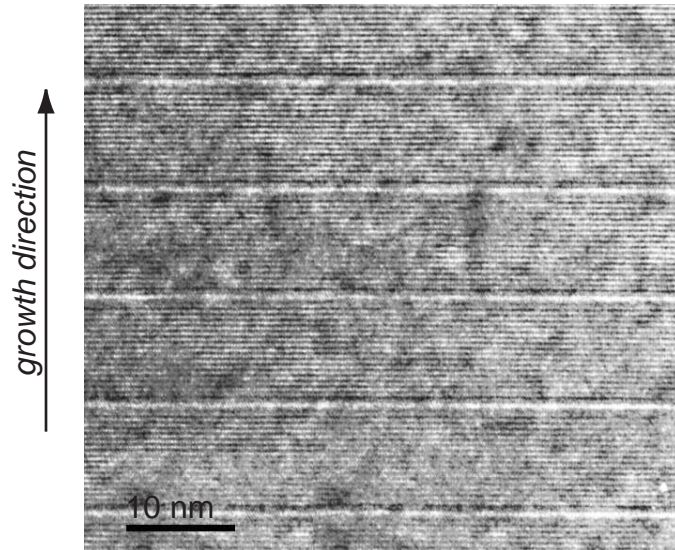
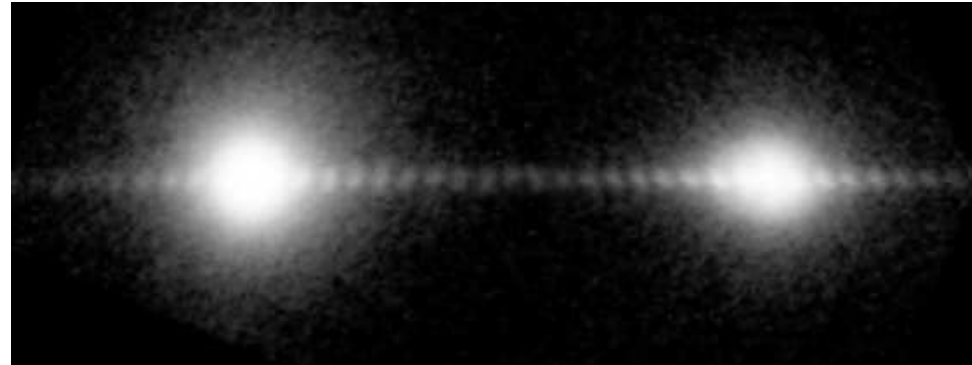


Nanoscale Ordering Discovered in Gallium Nitride

Mg Dopant Found to Cause "Microsuperlattice" Formation



Cross section transmission electron microscope image of an Mg-doped GaN single crystal showing regularly spaced, Mg-rich, planar defects (light horizontal lines).



"Selected area diffraction" analysis of image on left. The bright spots represent the spacing of (0001) basal planes in the GaN crystal. The series of satellite spots are due to the presence of the regularly spaced planar defects. The spot distribution confirms the 10.4 nm spacing seen in the TEM image.